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ABSTRACT

A method for obtaining compounds having selected properties for a particular application by forming base modules having at least two structural diversity elements from the reaction of a first compound having at least one structural diversity element and a first reactive group, with a second compound having at least one structural diversity element and a second reactive group, wherein the first and second groups combine by an addition reaction; producing a first array of molecules by varying at least one of the structural diversity elements of the compounds when producing the base modules; and screening the array to determine a first suitable compound for the particular application. The base modules are preferably formed from oxazolone- and aminimide- derived compounds. If desired, the method can be repeated by producing a second array of molecules through the formation of base modules having structural diversity elements that are modified from those of the first suitable compound; and screening the second array of molecules to determine a second suitable compound for the particular application. The second array producing and screening steps can be repeated as often as necessary to achieve an optimum compound for the particular application.

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